

REMARKS

Claims 1 - 8 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1 - 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pon et al. (U.S. Pat. No. 6,624,885). This rejection is respectfully traversed.

Claims 1, 4, and 5 have been amended to call for comparing, if a number of regions for a work piece concurs with the specified value, a difference in area between adjacent light receiving regions. Claims 1, 4, and 5 have also been amended to call for determining a presence or absence of foreign matters in the through holes depending on whether the difference in area is greater than a specified difference in area. Pon does not teach or suggest either of these steps of the claimed method. That is, Pon does not teach or suggest determining whether a number of regions for a work piece concurs with a specified value, nor does Pon teach or suggest comparing a difference in area between adjacent light receiving regions. Further, Pon does not teach or suggest determining a presence or absence of foreign matter in a through hole depending on whether a difference in area of a through hole is greater than a specified difference in area. Since Pon is silent with respect to these aspects of the claimed invention, the claimed method would not have been obvious.

With respect to dependent claims 6-8, these claims call for taking an image with an imaging focal point of a sensor camera being shifted from a surface of the work piece, such that

the image is taken with an image area of light passing through the through hole being expanded.

This subject matter is described on page 7 of the application where it states:

“In accordance with the present embodiment, the position of the focal point of the line sensor camera 14 is not concurred with the surface of the work piece 10, but is set at a position shifted from the surface of the work piece. In other words, the line sensor camera 14 is positioned at a distance $(L + \alpha)$ from the through hole of the work piece 10, which is longer than a focal length L , in order to apparently expand the area of the photographed image of the passing light.”

Applicant respectfully asserts that Pon does not teach or suggest such a method. The Examiner, however, has cited that Pon teaches at column 6, lines 49-51 that “the system preferably includes a means for moving one sample membrane 10 after another into position for inspection.” In view of this disclosure, the Examiner has taken the position that Pon teaches shifting the camera once the image of a tool is taken in order to take the image of another tool. This teaching, however, is with respect to simply removing one work piece after it has been inspected and inserting another work piece that needs to be inspected. That is, this teaching falls short of actually taking an image of the work piece with a focal point of the camera being shifted from a surface of the work piece such that the image is taken with an image area of light passing through the through hole being expanded, as claimed.

Moreover, there is no suggestion or motivation in the Pon reference take an enlarged image of the work piece by a placing the camera at a position that is outside of its focal length. Since Pon contains no teaching, suggestion, or motivation to utilize such a method, the claimed methods would not have been obvious. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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